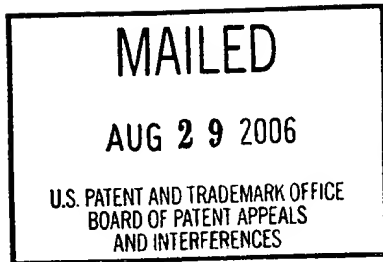


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**



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Ex parte HOWARD BARR

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Appeal No. 2006-0963  
Application No. 09/611,177

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ON BRIEF

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Before CRAWFORD, BAHR, and FETTING , Administrative Patent Judges.  
CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 18 to 40, which are all of the claims pending in this application. Claims 1 to 17 have been cancelled.

The appellant's invention relates to a radio-controlled aircraft utilizing accelerometers to determine the attitude of the aircraft (specification, pages 1 and 3).

A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

### The Prior Art

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Meyer	4,206,411	Jun. 03, 1980
Jenkins	4,725,956	Feb. 16, 1988
Berejik et al. (Berejik)	4,964,598	Oct. 23, 1990

Admitted Prior Art, page 6 of specification

### The Rejection

Claims 1 to 40 stand rejected under 35 U.S.C. § 103 as being unpatentable over Jenkins in view of Berejik, Meyer and Admitted Prior art on Page 6 of the Specification.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed June 18, 2004) and the final rejection (mailed July 1, 2003) for the examiner's complete reasoning in support of the rejections, and to the brief (filed March 29, 2004) and reply brief (filed August 20, 2004) for the appellant's arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The examiner has rejected claims 18 to 40 under 35 U.S.C. § 103 as being unpatentable over Jenkins in view of Berejik, Meyer and the admitted prior art on page 6. We initially note that the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

The examiner's findings in regard to this rejection can be found on pages 2 to 3 of the final rejection. In regard to the recitation in each of the independent claims related to reading positioning signals to a current attitude from an accelerometer, a positioning module that comprises a accelerometer or a positioning module that provides positioning signals representing an attitude of the aircraft, the examiner states:

The admitted prior art on page 6 discloses two-axis accelerometers that measure a directional component of the acceleration of gravity to determine the current attitude are well known in the art.

. . . .  
. . . .

It would have been obvious to one skilled in the art at the time the invention was made to have used accelerometers disclosed by the admitted prior arts on page 6 in Jenkins' system to know the operating status of the flight vehicle and to prevent damage to it [final rejection at page 3].

The appellants argue that the disclosure on page 6 of the specification is not prior art.

Page 6 of the specification discloses in relevant part:

Also feeding into the microcontroller 130 is a two-axis accelerometer 140 that provides pulse-width modulated signals 142, 144 corresponding to the present X and Y dimensional acceleration of the airplane 30, which corresponds to the airplane's pitch and roll. Several inclinometers could be used as accelerometers. For example, a Model LCL (The Fredricks Company, Huntingdon Valley, PA) or Biaxial Accelerometer Model LA02-0201-1 from Humphrey (San Diego, CA) are useful for embodiments of an accelerometer or an inclinometer. However, preferably the accelerometer is an Analog Devices (Norwood, MA) ADXL 202 Model accelerometer. The ADXL202 is a complete 2-axis accelerometer with a measurement range of  $\pm 2g$ . The ADXL202 can measure both dynamic acceleration (e.g., vibration) and static acceleration (e.g., gravity).

It is clear from the above-quoted section of the specification that accelerometers were well known in the art. Even if accelerometers were well known in the art, that alone would not have meant that their use in determining the current altitude of aircraft was well known and therefore there must have been some motivation to modify the Jenkins device to include accelerometers. We remind the examiner that when it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation in the prior art to make the selection made by the appellants. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some

teaching, suggestion or incentive supporting the combination. The extent to which such suggestion must be explicit in, or may be fairly inferred from, the references, is decided on the facts of each case, in light of the prior art and its relationship to the appellants' invention. As in all determinations under 35 U.S.C. § 103, the decision maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the appellants' structure as a template and selecting elements from references to fill the gaps. The references themselves must provide some teaching whereby the appellants' combination would have been obvious. In re Gorman, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (citations omitted). That is, something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. See In re Beattie, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984). In determining obviousness/nonobviousness, an invention must be considered "as a whole," 35 U.S.C. § 103, and claims must be considered in their entirety. Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

The decision of the examiner is reversed.

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AND  
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